CLAIMS

- 1. Microcontroller (30) intended to be incorporated in a portable object (1) of type smartcard, including at least:
 - a stud (VCC) to supply the said microcontroller (30) with current;
 - a data input and/or output contact stud (I/O);
 - an efficient data processing part (µCE); and
 - confidential information;

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- characterised in that it also includes:
- means (GEN, CAP, COM) to vary the supply voltage of the efficient data processing part (μCE), the said means being able to secure the said
 confidential data against current attacks.
 - 2. Microcontroller (30) according to claim 1, characterised in that the means used to vary the supply voltage of the efficient data processing part (µCE) include:
- a time variable resistor connected in series with the 15 microcontroller (30) power supply stud (VCC).
 - 3. Microcontroller (30) according to claim 2, characterised in that the variable resistor is a switch (COM) open during time intervals $T_{\rm off}$ and closed during time intervals $T_{\rm on}$.
- 4. Microcontroller (30) according to claim 3, characterised in that 20 the cyclic ratio $T_{\text{off}}/(T_{\text{on}} + T_{\text{off}})$ varies according to time.
 - 5. Microcontroller (30) according to claim 3 or 4, characterised in that the period $T_{on} + T_{off}$ varies according to time.
 - 6. Microcontroller (30) according to one of the previous claims, characterised in that the means used to vary the supply voltage of the efficient data processing part (µCE) include:
 - a pulse generator (GEN).
 - 7. Microcontroller (30) according to claim 6, characterised in that the pulse generator (GEN) includes a voltage threshold crossing

synchronisation circuit across the terminals of the efficient data processing part.

- 8. Microcontroller (30) according to one of the previous claims, characterised in that the means used to vary the supply voltage of the 5 efficient data processing part (µCE) include:
 - a condenser.
 - 9. Microcontroller (30) according to claim 8, characterised in that the condenser is a capacitor (CAP).
- 10. Microcontroller (30) according to claim 8 or 9, characterised in
 that the capacitor has a capacitance of greater than 0.1 nanofarad.
- 11. Microcontroller 30 according to one of the previous claims, characterised in that it includes a main layer (301) of silicon whose active face, which includes a circuit and supports the contact studs (300), is scaled to an additional protective layer (302) using a scaling layer (303).
 - 12. Microcontroller (30) according to claim 11, characterised in that the means (COM, CAP, GEN) used to vary the supply voltage of the efficient data processing part (μ CE) are located in the additional protective layer (302):